

538

Split A

DART AEROSPACE LTD		Work Order:	24132
Description: Dart 13-Man Shoulder Harness Kit (205/212/214/412)		Part Number:	D3197-041 D412-702-011
04.02.23 HFF			15
Dwg: D3195 Rev. A; D3196 Rev. A; D3197 Rev. A		Qty:	30 Kit(s)
Ref: D412-702 Rev.A page 9			Page 1 of 4

Step	Location	Procedure	By	Date	Qty
1	DC	Issue Traveler Note: D412-702-011 Kit consists of (2) D3195-041; (2) D3195-043; (1) D3196-1; (1) D3196-3; (1) D3196-4; (2) D3197-041.	U	05/08/31	30
2	DC	Photocopy bluefile and create labels per PPP D412-702-011 CHG001			
3	MV	Cut (2) blanks per (1) D412-702-011 Kit Cut blanks: (0.75" x 2.00") x 3.60" long Bar Material: 6061-T6/T651 (QQ-A-200/8) or (QQ-A-225/8) or (QQ-A-250/11) (M6061T6B0.750x02.000) Identify for D3195-1 Batch:			
4	MV	Cut (2) blanks per (1) D412-702-011 Kit Cut blanks: (1.50" x 1.25") x 3.60" long Bar Material: 6061-T6/T651 (QQ-A-200/8) or (QQ-A-225/8) or (QQ-A-250/11) (M6061T6B1.500x01.250) Identify for D3195-3 Batch:			
5	MV	Cut blank: (0.75" x 1.50") x 26.200" long Bar Material: 6061-T6/T651 (QQ-A-200/8) or (QQ-A-225/8) (M6061T6B0.750x01.500) Identify for D3196-1 Batch:	N/A		
6	MV	Cut (2) blanks per (1) D412-702-011 Kit Cut blanks: (0.75" x 1.50") x 34.750" long Bar Material: 6061-T6/T651 (QQ-A-200/8) or (QQ-A-225/8) (M6061T6B0.750x01.500) Identify (1) for D3196-3 Identify (1) for D3196-4 Batch:			
7	MV	Cut (2) blanks per (1) D412-702-011 Kit Cut blanks: 29.125" long Round Bar Material: 7075-T73 (QQ-A-200/11) or (QQ-A-225/9) 1" OD (M7075T73R1.000) Identify for D3197-1 Batch: m12053	Er	05/09/13	28
8	MV	Machine D3195-1 as per Folio FA334 and Dwg D3195 Identify as D3195-1			
9	QC2	Inspect parts as they come off the CNC machine			
10	MV	Deburr and Tumble			
11	QC8	Second check			
12	MV	Machine D3195-3 as per Folio FA334 and Dwg D3195 Identify as D3195-3			
13	QC2	Inspect parts as they come off the CNC machine			
14	MV	Deburr and Tumble	N/A		
15	QC8	Second check			

Out of Mat.
PTO

RELEASE

07.01.05 HFF

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			
05.09.15	28	"X" origin off by .100"	CP 05.09.15	SCRAP PART, WILL NOT FIT AIRCRAFT	ED 05.09.15	2 05.09.15	CP 05.09.15 per Q51042	2 05.09.15

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☐ No ☒ DQA: ☒ Date: 05/11/10

NOTE: Date & initial all entries

QA: N/C Closed: _____ Date: _____

DART AEROSPACE LTD		Work Order:	24/32
Description: Dart 13-Man Shoulder Harness Kit (205/212/214/412)		Part Number:	D3197-1 D412-702-011
Dwg: D3195 Rev. A; D3196 Rev. A; D3197 Rev. A		Qty:	30 Kit(s)
Ref: D412-702 Rev.A page 9		Page 2 of 4	

Step	Location	Procedure	By	Date	Qty
16	MV	Machine D3196-1 as per Folio FA339 and Dwg D3196 Identify as D3196-1			
17	QC2	Inspect parts as they come off the CNC machine			
18	MV	Deburr			
19	QC8	Second check			
20	MV	Machine D3196-3 as per Folio FA339 and Dwg D3196 Identify as D3196-3			
21	QC2	Inspect parts as they come off the CNC machine			
22	MV	Deburr			
23	QC8	Second check			
24	MV	Machine D3196-4 as per Folio FA339 and Dwg D3196 Identify as D3196-4			
25	QC2	Inspect parts as they come off the CNC machine			
26	MV	Deburr			
27	QC8	Second check			
28	MV	Machine D3197-1 as per Folio FA340 and Dwg D3197 Note: Need to be faced to size Identify as D3197-1	SD/	05.09.15	27
29	QC2	Inspect parts as they come off the CNC machine	SD/	05.09.15	27
30	MV	Deburr	SD/	05.09.15	27
31	QC8	Second check	SD/	05.09.15	27
32	FP	Chemical Conversion Coat as per QSI 005 4.1 D3195-1/-3; D3196-1/-3/-4; <u>D3197-1</u>	FC	05.09.20	27
33	FP	Powder Coat Grey Sandtex (Ref: 4.3.5.6) as per QSI 005 4.3 D3195-1/-3; D3196-1/-3/-4; <u>D3197-1</u>	FC	05.09.21	27
34	QC3	Inspect work to Step 33.	MM	05.09.21	27
35	GA	Cut (2) blanks per (1) D412-702-011 Kit Cut blanks: (4.986" x 0.500") x 0.125" thick as per Dwg D3195 Material: D3195 Rubber 2.500" Punch holes as per Dwg Identify as D3195-5 Batch: _____			
36	GA	Cut (2) blanks per (1) D412-702-011 Kit Cut blanks: (4.986" x 1.000") x 0.125" thick as per Dwg D3195 Material: D3195 Rubber 2.500" Punch holes as per Dwg Identify as D3195-7 Batch: _____			

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

NOTE: Date & initial all entries

QA: N/C Closed: _____ Date: _____

DART AEROSPACE LTD		Work Order:	24132 A
Description: Dart 13-Man Shoulder Harness Kit (205/212/214/412)		Part Number:	D3197-1 D412-702-011
04.02.23		Qty:	30 Kit(s)
Dwg: D3195 Rev. A; D3196 Rev. A; D3197 Rev. A1		Ref: D412-702 Rev.A page 9	
		Page 3 of 4	

Step	Location	Procedure	By	Date	Qty
37	GA	Bond D3195-5 into D3195-1 as per Dwg D3195 Pick: Qty Description Batch A/R Contact Cement Identify as D3195-041			
38	GA	Bond D3195-7 into D3195-3 as per Dwg D3195 Pick: Qty Description Batch A/R Contact Cement Identify as D3195-043			
39	QC5	Inspect work to Step 38			
40	GA	Assemble (2) D3197-041 as per Dwg D3197. (Note: D3197-1 is on BOM as material from Step 7) Pick: Qty Part Number Description Batch 4 D2690-5 Lanyard 28 B225903 2 D3197-1 Bar (2) B24132 4 D3242-1 Tag (1) B23931 (11) B24132 12 AN960JD10 Washer M17634 4 DARS-0048 Hip Pin M186064 4 MS21042L3 Nut (or -3) M17652 4 MS27039-1-24 Bolt Screw #4-20 M3283 Identify as D3197-041		05/11/07	15
41	QC5	Inspect work to Step 40		05-11-08	15
42	KP	Pick: Packing Kit (Note: D3195-041/-043, D3196-1/-3/-4 are on BOM as material from Steps 3-6, 35-38) Qty Part Number Description Batch 2 D3195-041 Bracket 2 D3195-043 Bracket 1 D3196-1 Bar 1 D3196-3 Bar 1 D3196-4 Bar 2 D3197-041 Bar 4 D3198-1 Fitting 18 D3215-041 Harness Assembly 4 D3215-043 Harness Assembly 4 AN4-5A Bolt 4 AN4-13A Bolt 8 AN4-20A Bolt 20 AN960JD416 Washer 12 MS21042L4 Nut (or -4) 8 MS24694-S152 Screw 2 D3268-1 Placard			
43	QC4	Inspect Kit 100% for Completeness on the W/O			
44	PK	Identify and pack for shipping as per PPP D412-702-011 10 + stock D3197-041		05/11/08	15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

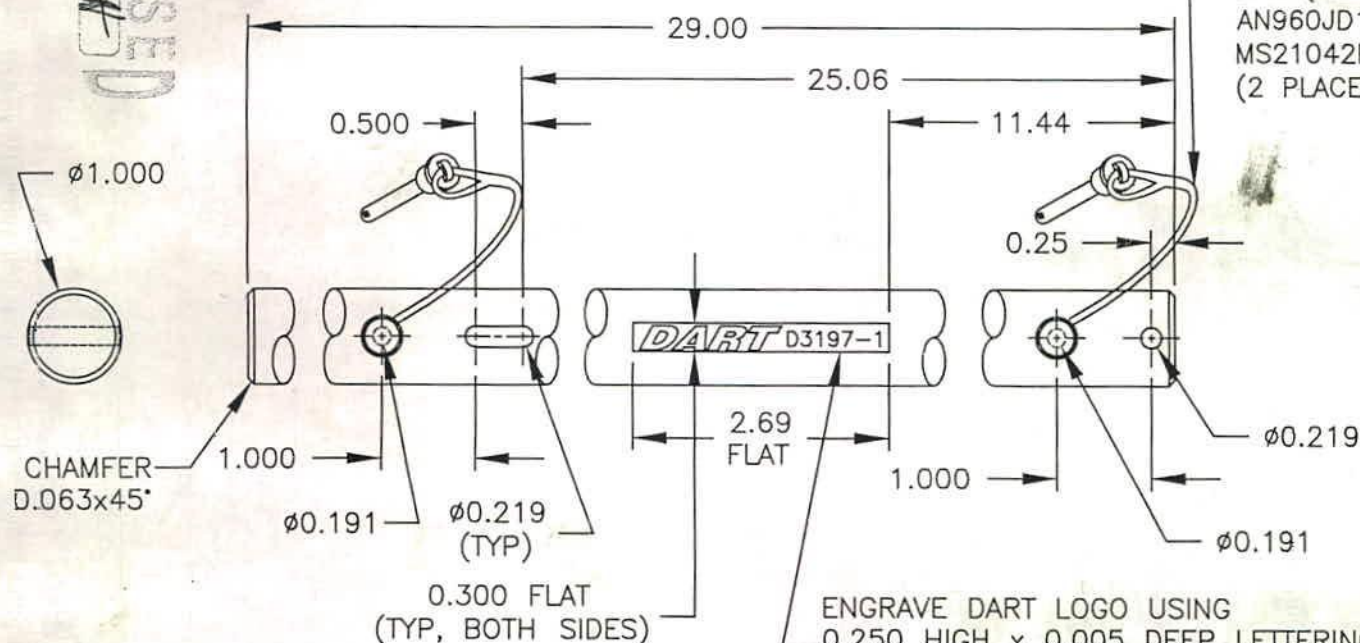
NOTE: Date & initial all entries

QA: N/C Closed: _____ Date: _____

1095 0955

RETURN TO
ENGINEERINGUNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE

WORK ORDER

NO. 24132RELEASED
03.10.10**D3197-041 BAR ASSEMBLY****D3197-1 BAR**

- 1) MATERIAL: 7075-T73 ROUND BAR (QQ-A-200/11 or QQ-A-225/9) $\phi 1.000$ O.D.
(REF DART SPEC. M7075T73R1.000)
- 2) POSSIBLE SUPPLIER FOR DARS-004 PIP PIN: REID TOOL SUPPLY.
IT IS ACCEPTABLE TO REPLACE WITH ANY STAINLESS STEEL DOUBLE-ACTING QUICK-RELEASE PIN WITH A $\phi 0.188$ DIAMETER PIN, 1.8"-2.0" GRIP LENGTH, MIN. OF 200 lbs PULL-OUT STRENGTH, AND MIN. OF 5150 lbs DOUBLE SHEAR.
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT SANDTEX (4.3.5.6) PER DART QSI 005 4.3
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES
- 6) FOR TOOLING, IT IS ACCEPTABLE TO HAVE A 0.06 DEEP x 60° CENTER MARK AT EITHER END OF THE BAR

D3242-1 TAG (1)
 DARS-004 PIP PIN (1)
 MS27039-1-24 BOLT (1)
 AN960JD10 WASHER (1)
 D2690-5 LANYARD (1)
 AN960JD10 WASHER (1)
 BAR (REF)
 AN960JD10 WASHER (1)
 MS21042L3 NUT (1)
 (2 PLACES)

DART



DESIGN	DRAWN BY	DART AEROSPACE LTD
CHECKED	APPROVED	HAWKESBURY, ONTARIO, CANADA
DATE		DRAWING NO.
03.07.01		D3197
		TITLE
		BAR
		NEW ISSUE
		ADD D3242-1 TAG
		REV. A
		SHEET 1 OF 1
		SCALE
		1:1

Job Costing Report

Dart Aerospace Ltd.
Hawkesbury

Aug 30, 2005
07:42 am

Work Order No : 0024132
Project Name : D3197-1
Project For : WK538
Work Order Type : Main
Main WO Number :
House Part Number : D3197-1
Description : Bar
Manufactured : Yes
Amount Req'd : 30
Amount Done : 0
Start Date : 08-29-05
Est Finish Date : 09-21-05
Act Finish Date :
Drawings Req'd : No
Ok for Approval :
Approval Rec'd :

Department Code:
Burden Flags : NNNNNNNN
WO Status : Open
Invoice State : Not Invoiced
Invoice Date :
Invoice Number :
Invoice Amount : 0.00

Order Entry No :
OE Value : 0.00

Est Mark Up : 0.000%
Actual Mark Up : 0.000%

\$0 Posted to Finished Goods

	Estimated	Actual	Var. %	Posted	To Post
Material Cost :	0.00	0.00	0.00	0.00	0.00
Engineering Hours :	0.00	0.00	0.00		
Engineering Cost :	0.00	0.00	0.00	0.00	0.00
Production Hours :	0.00	0.00	0.00		
Production Cost :	0.00	0.00	0.00	0.00	0.00
Packaging Hours :	0.00	0.00	0.00		
Packaging Cost :	0.00	0.00	0.00	0.00	0.00
OverHead Hours :	0.00	0.00	0.00		
OverHead Cost :	0.00	0.00	0.00	0.00	0.00
CNC Hours :	0.00	0.00	0.00		
CNC :	0.00	0.00	0.00	0.00	0.00
Misc. Hours :	0.00	0.00	0.00		
Misc. :	0.00	0.00	0.00	0.00	0.00
Burden :	0.00	0.00	0.00		
Total Cost :	0.00	0.00	0.00		
Mark up :	0.000	0.000			
Selling Cost :	0.00	0.00			

	Estimated	Actual
Labour Hrs/Amount Done :	0.00	0.00
Profits/(Loss) :	0.00	0.00

Date: Wednesday, 11/9/2005 7:30:24 AM
 User: Linda Lacelle

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: BAR
Job Number	: 24132		
Estimate Number	: 10390		
P.O. Number	:	Part Number	: D3197041
This Issue	: 11/9/2005 S.O. No. :	Drawing Number	: D3197 REV A1
Prsht Rev.	: NC	Project Number	:
First Issue	: / / Type : MACHINED PARTS	Drawing Revision	: A1
Previous Run	:	Material	:
Written By	:	Due Date	: 11/16/2005 Qty: 15 Um: Each
Checked & Approved By	:		
Comment	: Est Rev: A New Issue 05-11-08 JLM		

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
1.0	M7075T73R1000	7075-T73 Round Bar 1" OD

2.0	BAND SAW	BAND SAW
-----	----------	----------



Comment: BAND SAW
 Cut blanks: 29.125" long

3.0	LATHE CONV.	CONVENTIONAL LATHE
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Comment: CONVENTIONAL LATHE
 Turn To Lengh and Chamfers as per Dwg D3197

4.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
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Comment: INSPECT PARTS AS THEY COME OFF MACHINE

5.0	HAAS1	HAAS CNC VERTICAL MACHINING #1
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Comment: HAAS CNC VERTICAL MACHINING #1

1-Machine D3197-1 as per Folio FA340 and Dwg D3197

2-Deburr

6.0	QC2	INSPECT PA
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Comment: INSPECT PARTS AS THEY COME OFF MACHINE

MIS T
 LOSS

Date: Wednesday, 11/9/2005 7:30:24 AM
User: Linda Lacelle

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BAR

Job Number: 24132

Part Number: D3197041

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

7.0

QC8

SECOND CHECK



Comment: SECOND CHECK

8.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

9.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat Grey Sandtex (Ref. 4.3.5.6) as per QSI 005 4.3

10.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

11.0

D26905

Lanyard ass'y

12.0

D32421

Tag

13.0

AN960JD10

Washer

14.0

DARS004

Pip Pin

15.0

MS21042L3

Nut

16.0

MS27039124

Screw

17.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

Assemble D3197-041 as per Dwg D3197

18.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

19.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: _____

Date: Wednesday, 11/9/2005 7:30:24 AM
User: Linda Lacelle

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BAR

Job Number: 24132

Part Number: D3197041

Job Number:



Seq. #:

Machine Or Operation:

Description :

20.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL
Inspection Level 21

Job Completion



Date: Wednesday, 11/9/2005 3:52:50 PM

User: Linda Lacelle

INVENTORY ITEMS PICKED FOR SLIP NUMBER 9

Project No. :
 Customer : Dart Helicopters Services
 Part Number : D3197041
 Job Number : 24132

Drawing Number : D3197 REV A1
 Drawing Name : BAR
 Due Date : / /
 Qty : 15
 Slip # : 9

		Location	Store	Picking	Lot No.	Serial No.	Req'd	Taken
1.0	M7075T73R1000 7075-T73 Round Bar 1" OD							
	Available 119.00	MAIN			18453		38.12	36.4000 f
11.0	D26905 Lanyard ass'y							
	Available 73.00	MAIN			22590		60.00	27.0000 Each
		MAIN			24165		60.00	20.0000
		MAIN			24284		60.00	13.0000
12.0	D32421 Tag							
	Available 61.00	MAIN			24321		60.00	60.0000 Each
13.0	AN960JD10 Washer							
	Available 2097.00	MAIN			17634		180.00	180.0000 Each
14.0	DARS004 Pip Pin							SHORTAGE.
	Available 29.00	MAIN			18962		60.00	12.0000 Each
		MAIN			18980		60.00	17.0000
15.0	MS21042L3 Nut							
	Available 2940.00	MAIN			17652		60.00	22.0000 Each
		MAIN			17852		60.00	38.0000
16.0	MS27039124 Screw							
	Available 83.00	MAIN			3283		60.00	60.0000 Each

Date Wednesday, 11/9/2005 3:56:43 PM
 User Linda Lacelle

Value - Transaction Report

Report Criteria As Follows

Customer	ALL	Employee Id	ALL
Part Number	ALL	Project Number	ALL
Job Number	24132	Operation	ALL
Job Type	ALL	Class / Depart.	ALL
Date Range From	November 09, 2005	Sorted By	Customer+Job Order
To	November 09, 2005		

Job No.	Customer	Part Number	Employee	Type	Description	Date	L Time	M Time	Qty	Labour	Overhead	Ext. Cost	Inv. Cost	Sub. Cost
Customer Dart Helicopters Services														
24132	CU-DAR	D3197041	LACE01	INVENT.	M7075T73R1000	11/9/2005	0.00	0.00	66.40	\$0.00	\$0.00	\$0.00	\$683.79	\$0.00
24132	CU-DAR	D3197041	MISLAB	INVENT.	M7075T73R1000	11/9/2005	0.00	0.00	15.00	\$0.00	\$0.00	\$0.00	\$429.35	\$0.00
24132	CU-DAR	D3197041	LACE01	INVENT.	D26905	11/9/2005	0.00	0.00	60.00	\$0.00	\$0.00	\$0.00	\$208.80	\$0.00
24132	CU-DAR	D3197041	LACE01	INVENT.	D32421	11/9/2005	0.00	0.00	60.00	\$0.00	\$0.00	\$0.00	\$732.60	\$0.00
24132	CU-DAR	D3197041	LACE01	INVENT.	AN960JD10	11/9/2005	0.00	0.00	180.00	\$0.00	\$0.00	\$0.00	\$9.00	\$0.00
24132	CU-DAR	D3197041	LACE01	INVENT.	DARS004	11/9/2005	0.00	0.00	29.00	\$0.00	\$0.00	\$0.00	\$1,098.04	\$0.00
24132	CU-DAR	D3197041	LACE01	INVENT.	MS21042L3	11/9/2005	0.00	0.00	60.00	\$0.00	\$0.00	\$0.00	\$4.80	\$0.00
24132	CU-DAR	D3197041	LACE01	INVENT.	MS27039124	11/9/2005	0.00	0.00	60.00	\$0.00	\$0.00	\$0.00	\$12.00	\$0.00
Subtotal							0.00	0.00	530.40	\$0.00	\$0.00	\$0.00	\$3,178.38	\$0.00
Total Records Retrieved :							8	0.00	0.00	530.40	\$0.00	\$0.00	\$0.00	\$3,178.38

Job Costing Report

Dart Aerospace Ltd.
Hawkesbury

Nov 08, 2005
11:04 am

Work Order No : 0024132
Project Name : D3197-1
Project For : WK538
Work Order Type : Main
Main WO Number :
House Part Number : D3197-1
Description : Bar
Manufactured : Yes
Amount Req'd : 30
Amount Done : 0
Start Date : 08-29-05
Est Finish Date : 09-21-05
Act Finish Date :
Drawings Req'd : No
Ok for Approval :
Approval Rec'd :

Department Code:
Burden Flags : NNNNNNNN
WO Status : Open
Invoice State : Not Invoiced
Invoice Date :
Invoice Number :
Invoice Amount : 0.00
Order Entry No :
OE Value : 0.00
Est Margin : 0.000%
Actual Margin : 0.000%

\$0 Posted to Finished Goods

	Estimated	Actual	Var. %	Posted	To Post
Material Cost :	0.00	0.00	0.00	0.00	0.00
Engineering Hours :	0.00	0.00	0.00		
Engineering Cost :	0.00	0.00	0.00	0.00	0.00
Production Hours :	0.00	23.13	100.00		
Production Cost :	0.00	429.35	100.00	0.00	429.35
Packaging Hours :	0.00	0.00	0.00		
Packaging Cost :	0.00	0.00	0.00	0.00	0.00
OverHead Hours :	0.00	0.00	0.00		
OverHead Cost :	0.00	0.00	0.00	0.00	0.00
CNC Hours :	0.00	19.50	100.00		
CNC :	0.00	0.00	0.00	0.00	0.00
Misc. Hours :	0.00	0.00	0.00		
Misc. :	0.00	0.00	0.00	0.00	0.00
Burden :	0.00	0.00	0.00		
Total Cost :	0.00	429.35	100.00		
Margin :	0.000	0.000			
Selling Cost :	0.00	429.35			

Labour Hrs/Amount Done :	Estimated	Actual
Profits/(Loss) :	0.00	0.00
	0.00	(-429.35)

*Mis
opening bal
W
05-11-09*